

## **RAW SEQUENCE LISTING**

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Application Serial Number: 101619, 939 A  
Source: ITW/6  
Date Processed by STIC: 11/29/06

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IFW16

## RAW SEQUENCE LISTING

DATE: 11/29/2006

PATENT APPLICATION: US/10/619,939A

TIME: 13:49:13

Input Set : E:\Revised Sequence Listing 11-21-06.ST25.txt  
 Output Set: N:\CRF4\11292006\J619939A.raw

3 <110> APPLICANT: Advisys, Inc.  
 5 <120> TITLE OF INVENTION: Codon optimized Synthetic Plasmid  
 7 <130> FILE REFERENCE: 108328.00146  
 C--> 9 <140> CURRENT APPLICATION NUMBER: US/10/619,939A  
 C--> 9 <141> CURRENT FILING DATE: 2003-07-15  
 9 <160> NUMBER OF SEQ ID NOS: 43  
 11 <170> SOFTWARE: PatentIn version 3.3  
 13 <210> SEQ ID NO: 1  
 14 <211> LENGTH: 3534  
 15 <212> TYPE: DNA  
 16 <213> ORGANISM: artificial sequence  
 18 <220> FEATURE:  
 19 <223> OTHER INFORMATION: Plasmid vector having an analog GHRH sequence.  
 21 <400> SEQUENCE: 1  
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 24 accgcggtgg cggccgtccg ccctcgacatccctacg acacccaa atggcgacgg 120  
 26 gtgaggaatg gtggggagtt attttagag cggtgaggaa ggtgggcagg cagcagggtgt 180  
 28 tggcgtcta aaaataactc cccggagttt ttttagagc ggaggaatgg tggacaccca 240  
 30 aatatggcga cggttcctca cccgtcgcca tattttgggtg tccgcctcg gcccggccg 300  
 32 cattcctggg ggccggccgg tgctcccgcc cgcctcgata aaaggctccg gggccggccg 360  
 34 cggcccacga gctaccggaa ggagcgggag ggcacaagct ctagaactag tggatccaa 420  
 36 ggcacaactc cccgaaccac tcagggtcct gtggacagct cacctagctg ccatgggtct 480  
 38 ctgggtgttc ttctttgtga tcctcacccct cagcaacagc tcccactgtct ccccacctcc 540  
 40 cccttgacc ctcaggatgc ggcggcacgt agatgccatc ttcaccaaca gctaccggaa 600  
 42 ggtgctggcc cagctgtccg cccgcaagct gtcacaggac atcctgaaca ggcagcagg 660  
 44 agagaggaac caagagcaag ggcataatg actgcaggaa ttgcataatca agcttatcg 720  
 46 ggtggcatcc ctgtgacccccc tccccagtgc ctctcctggc cctggaaatgtt gccactccag 780  
 48 tgccaccagg cttgtccta ataaaattaa gttgatcat tttgtctgac taggtgtcct 840  
 50 tctataat tatgggggtgg aggggggtgg tatggagcaa gggcaagtt gggaaagacaa 900  
 52 cctgttagggc ctgcggggc tattgggaac caagctggag tgcagtggca caatcttggc 960  
 54 tcactgcaat ctccgcctcc tgggttcaag cgattctcct gcctcagcct cccgagttgt 1020  
 56 tggattcca ggcacatg accaggctca gctaattttt gtttttttgg tagagacggg 1080  
 58 gttcaccat attggccagg ctggtctcca actcctaatac tcaggtgatc tacccacatt 1140  
 60 ggcctccaa attgctggaa ttacaggcgt gaaccactgc tccctccct gtccttctga 1200  
 62 tttaaaata actataccag caggaggacg tccagacaca gcataggcta cctggccatg 1260  
 64 cccaaccggg gggacattt agttgttgc ttggcactgt cctctcatgc gttgggtcca 1320  
 66 ctcagtagat gcctgttcaa ttgcataccg tcgacactga gggggggccc ggtaccagct 1380  
 68 ttgttccct ttagtgaggg ttaatttgc gcttggcgta atcatggtca tagtgttcc 1440  
 70 ctgtgtaaa ttgttatccg ctcacaattc cacacaacat acgagccgga agcataaaat 1500  
 72 gtaaagcctg ggggtgcctaa tgagttagct aactcacatt aattgcgtt cgctcactgc 1560  
 74 ccgccttcca gtcgggaaac ctgtcggtcc agctgcatta atgaatcgcc caacgcgcgg 1620  
 76 ggagaggccgg tttgcgtatt gggcgcttt ccgcctcctc gctcactgac tcgctgcgt 1680  
 78 cgtcggtcgtcc gctgcggcga gcggtatcg ctcactaaa ggcggtaata cggttatcca 1740

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80 cagaatcagg ggataacgca gaaaaagaaca tgtgagcaaa aggccagcaa aaggccagga	1800
82 accgtaaaaa ggccgcgttg ctggcgcccc tccataggct ccgcggccct gacgagcatc	1860
84 acaaaaatcg acgctcaagt cagaggtggc gaaacccgac aggactataa agataccagg	1920
86 cgttcccccc tggaaagctcc ctcgtgcgtc ctccgttcc gaccctgcgg cttaccggat	1980
88 acctgtccgc ctttctccct tcgggaagcg tggcgcttcc tcatacgctca cgctgttaggt	2040
90 atctcagttc ggtgttaggtc gtctcgctca agctgggctg tgtgcacgaa ccccccgttc	2100
92 aqcccqaccg ctgcgcctta tccggtaact atcgtcttga gtccaaacccg gtaagacacg	2160
94 acttatcgcc actggcagca gccactggta acaggattag cagagcgagg tatgttaggcg	2220
96 gtgctacaga gttcttgaag tggggccta actacggcta cactagaaga acagatatttg	2280
98 gtatctgcgc tctgctgaag ccaagttaccc tcggaaaaag agttggtagc tcttgcgtccg	2340
100 gcaaacaaac caccgctggc agcgggtggc ttttgttttgc caagcagcag attacgcgc	2400
102 gaaaaaaaaagg atctcaagaa gatccttgc tctttctac ggggtctgac gctcagaaga	2460
104 actcgtcaag aaggcgatag aaggcgatgc gctcgaaatc gggagcgccg ataccgtaaa	2520
106 gcacgaggaa gcggcgcagcc cattcgccgc caagctcttca agcaatatca cgggtgcgc	2580
108 acgctatgtc ctgatagcggtt cccgccaccc ccagccggcc acagtcgtatc aatccagaaaa	2640
110 agcggccatt ttccaccatg atattcgca agcaggcatc gccatgggtc acgacgagat	2700
112 cctcgccgtc gggcatgcgc gccttgagcc tggcgaacag ttcggctggc gcgagccct	2760
114 gatgtcttc gtccagatca tcctgatcga caagaccggc ttccatccga gtacgtgcgc	2820
116 gatgtatgcg atgtttcgct tgggtggtagc atggcaggt agccggatca agcgtatgc	2880
118 gcccgcgcgt tgcatcagcc atgatggata ctttctcgcc aggagcaagg tgagatgaca	2940
120 ggagatcctg ccccgccact tcgccccata gcagccagtc cttcccgct tcagtgcacaa	3000
122 cgtcgagcac agctgcgc aaacacgcccc tcgtggccag ccacgatagc cgcgcgtgc	3060
124 cgtcctgcgtt tcatttcagg gcaccggaca ggtcggtt gacaaaaaga accggggcgcc	3120
126 cctcgccgtc cagccggAAC acggcgccat cagacgcgc gattgtctgt tgtgcccagt	3180
128 catagccgaa tagccctctcc acccaagcgg ccggagaacc tgcgtgcataat ccatcttggtt	3240
130 caatcatgcg aaacgatccct catcgttctt cttgatcaga tcttgcgttcc ctgcgcgc	3300
132 agatccttgg cggcaagaaaa gccatccagt ttactttgc gggcttccca accttaccag	3360
134 agggcgcccc agctggcaat tccgggttcgc ttgtgttcca taaaaccggc cagtcttagca	3420
136 actgttggga agggcgatcg gtgcgggcct ctgcgttatt acgcccgcgt gcgaaagggg	3480
138 gatgtgtgc aaggcgatccat agttggtaa cgccagggtt ttcccagtcgac	3534
141 <210> SEQ ID NO: 2	
142 <211> LENGTH: 2739	
143 <212> TYPE: DNA	
144 <213> ORGANISM: artificial sequence	
146 <220> FEATURE:	
147 <223> OTHER INFORMATION: Optimized vector having an analog GHRH sequence.	
149 <400> SEQUENCE: 2	
150 ccaccgcgggt ggcggccgtc cgcgcgttcc accatcctca cgacacccaa atatggcgac	60
152 ggggtgaggaa tgggtggggag ttatTTTTCAGCAGGTGGAGG aagggtggca ggcagcaggt	120
154 gttggcgctc taaaaataac tcccgccggat tatttttaga gcccggat ggtggacacc	180
156 caaatatggc gacgggttccct caccgcgtccg catatTTGGG tgcgtgcgcctt cggccggggc	240
158 cgcattcctg gggggccggc ggtcgccctt cccgcgttca taaaaggctc cggggccggc	300
160 ggcggcccac gagctaccccg gaggagccgg agggcccaag cggatccaa ggcggccactc	360
162 cccgaaccac tcagggttccct gtggacagct cacctagctg ccatgggttgc ctgggtgtt	420
164 ttctttgttca tcctcaccctt cagcaacacgc tccactgtt cccacccctt ccctttgacc	480
166 ctcaggatgc ggcggatgc agatgcgc ttcaccaaca gctaccggaa ggtgtgttcc	540
168 cagctgtccg cccgcgttccctt gtcggccggatc atcatgatcgc ggcggccggg agagaggg	600
170 caagagcaag gacgatccatg actgcggaa ttccatgttca agcttgcgtt ggtggatcc	660
172 ctgtgaccctt tcccccaggatgc ctctccttgc ccttggaaatgtt gcccactccag tgcccaccag	720

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174	ccttgcctta ataaaattaa gttgcatcat tttgtctgac taggtgtcct tctataat	780
176	tatgggtgg aggggggtgg tatggagcaa gggcaagtt gggaaagacaa cctgttagggc	840
178	tcgagggggg gccccgtacc agctttgtt cccttagtg agggtaatt tcgagcttgg	900
180	tcttcgctt cctcgctcac tgactcgctg cgctcggtcg ttccggctg gcgagcggta	960
182	tcagctcact caaaggcggt aatacggta tccacagaat caggggataa cgacaggaaag	1020
184	aacatgttag aaaaaggcca gcaaaaaggcc aggaaccgt aaaaaggccgc gttgctggcg	1080
186	tttttccata ggctccgccc ccctgtacgaa catcacaaaa atcgacgctc aagttagagg	1140
188	tggcgaaacc cgacaggact ataaaagatac caggcgttc cccctgaaag ctccctcg	1200
190	cgctctcctg ttccgaccct gccgcttacc ggataacctgt ccgccttct cccttcggga	1260
192	agcgtggcgcc ttctcatag ctcacgctgt aggtatctca ttccgggtgt ggtcggtcgc	1320
194	tccaaagctgg gctgtgtgca cgaacccccc gttcagcccg accgctgccc cttatccgg	1380
196	aactatcgctc ttgagtccaa cccggtaaga cacgacttat cgccactggc agcagccact	1440
198	ggtaacagga ttagcagagc gaggtatgtt ggcgggtcta cagagttctt gaagtgggtgg	1500
200	cctaactacg gctacactag aagaacagta tttgttatct gcgcctctgt gaagccagtt	1560
202	accttcgaa aaagagttgg tagctttga tccggcaaac aaaccacccg tggtagcggt	1620
204	gtttttttt tttcaagca gcagattacg cgcaaaaaaaaaa aaggatctca agaagatcct	1680
206	ttgatctttt ctacggggtc tgacgctca ctagcgtca gaagaactcg tcaagaaggc	1740
208	gatagaaggc gatgcgtgc gaatcgggag cggcgatacc gtaaagcactg aggaagegg	1800
210	caggccattt gccgccaagg tcttcagcaaa tatatacgggt agccaacgct atgtcctgat	1860
212	agcggccgcgca cacaccccgcc cgccacagt cgatgaatcc agaaaaggccg ccattttcca	1920
214	ccatgatatt cggcaagcagc gcatcgccat gagtacacgac gagatcctcg ccgtcgggca	1980
216	tgcgcgcctt gagcctggcg aacagttcgg ctggcgccgag cccctgtatgc tcttcgtcca	2040
218	gatcatcctg atcgacaaga cccgcttcca tccgagtacg tgctcgctcg atgcgtatgtt	2100
220	tcgcttgggt gtcgaatggg caggtagccg gatcaagcgt atgcagccgc cgcatttgc	2160
222	cagccatgtt ggatactttc tcggcaggag caaggtgaga tgacaggaga tcctggcccg	2220
224	gcacttcgccc caatagcagc cagtcccttc ccgttccagt gacaacgtcg agcacagctg	2280
226	cgcaagggaaac gcccgtcg gcccggccacg atagccgcgc tgccctcgcc tgcaagtccat	2340
228	tcagggcacc ggacaggctg gtcttgacaa aaagaacccgg gcccggccgt gctgacagcc	2400
230	ggaacacggc ggcacatcagag cagccgattt tctgttgtgc ccagtcatag ccgaatagcc	2460
232	tctccaccca agcggccggaa gAACCTGCGT gcaatccatc ttgttcaatc atgcgaaacg	2520
234	atcctcatccc tgtcttttca tcaatcttgc atccctgc ccattcagatc cttggcgcc	2580
236	agaaagccat ccagtttact ttgcagggtt tcccaacctt accagaggcc gcccagctg	2640
238	gcaattccggg ttccgttgcgtt gtcataaaaa ccggccagtc tagcaactgt tgggaaggc	2700
240	gatcggttaa tacgactcac tataaggcgaa attggagct	2739
243	<210> SEQ ID NO: 3	
244	<211> LENGTH: 795	
245	<212> TYPE: DNA	
246	<213> ORGANISM: artificial sequence	
248	<220> FEATURE:	
249	<223> OTHER INFORMATION: Nucleic acid sequence for the antibiotic resistance gene kanamycin.	
252	<400> SEQUENCE: 3	
253	atgattgaac aagatggatt gcacgcagg tctccggccg ttgggttgg gaggctattc	60
255	ggctatgact gggcacaaca gacaatggc tgctctgtat ccggcggtt ccggcggtca	120
257	gcccgggttct ttttgtcaag accgacctgt ccgggtccctt gaaatgtactg	180
259	caggacgagg cagcgcggct atcgtggctg gcccacacgg gcgttccctg cgcagctgt	240
261	ctcgacgttg tcaactgaagc gggaaaggac tggctgtat tggcgttgg gcccggcc	300
263	gatcttcgtt catctcaccc tgcctctggc gagaaagtat ccatcatggc tgatgtcaat	360
265	ccggcggtc atacgcttgc tccggctacc tgcccatcg accaccaagc gaaacatcg	420

## RAW SEQUENCE LISTING

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267 atcgagcgag cacgtactcg gatggaagcc ggtcttgcg atcaggatga tctggacgaa	480
269 gagcatcagg ggctcgccg agccgaactg ttgcgcaggc tcaaggcgcg catccccgac	540
271 ggccgaggatc tcgtcgatc tcatggcgat gcctgcttc cgaatatcat ggtggaaaat	600
273 ggccgctttt ctggattcat cgactgtggc cggctgggtg tggcggaccg ctatcaggac	660
275 atagcggttgg ctaccctgtga tattgctgaa gagcttggcg gccaatgggc tgaccgcttc	720
277 ctctgtctt acggatcgcc cgctcccgat tcgcagcgca tcgccttcta tcgccttctt	780
279 gagcqagtctc tctga	795
282 <210> SEQ ID NO: 4	
283 <211> LENGTH: 219	
284 <212> TYPE: DNA	
285 <213> ORGANISM: artificial sequence	
287 <220> FEATURE:	
288 <223> OTHER INFORMATION: Sequence for an analog porcine GHRH sequence.	
290 <400> SEQUENCE: 4	
291 atgggtctct gggtgttctt ctttgtatc ctcaccctca gcaacagctc ccactgctcc	60
293 ccacccccc ctttgaccct caggatgcgg cggcacgtag atgccatctt caccacacgc	120
295 tacccgaagg tgctggccca gctgtccgcg cgcaagctgc tccaggacat cctgaacagg	180
297 cagcagggag agaggaacca agagcaagga gcataatga	219
300 <210> SEQ ID NO: 5	
301 <211> LENGTH: 246	
302 <212> TYPE: DNA	
303 <213> ORGANISM: artificial sequence	
305 <220> FEATURE:	
306 <223> OTHER INFORMATION: Sequence for an analog mouse GHRH sequence.	
308 <400> SEQUENCE: 5	
309 gccatgggtgc tctgggtgct ctttgtatc ctcaccctca ccagcggcag ccactgcagc	60
311 ctgcctccca gccctccctt caggatgcag aggacacgtgg acgccatctt caccacacac	120
313 tacaggaagc tgctgagcca gctgtacgccc aggaaggtga tccaggacat catgaacaag	180
315 cagggcgaga ggatccagga gcagagggcc aggctgagct gataagcttgcgatgagttc	240
317 ttctaa	246
320 <210> SEQ ID NO: 6	
321 <211> LENGTH: 234	
322 <212> TYPE: DNA	
323 <213> ORGANISM: artificial sequence	
325 <220> FEATURE:	
326 <223> OTHER INFORMATION: Sequence for an analog rat GHRH sequence.	
328 <400> SEQUENCE: 6	
329 gccatggccc tgtgggtgtt cttcgtgctg ctgaccctga ccagcggaaag ccactgcagc	60
331 ctgcctccca gccctccctt cagggtgcgc cggcacgcgc acgccatctt caccacacgc	120
333 tacaggagga tcctggccca gctgtacgctt aggaagctcc tgcacgagat catgaacagg	180
335 cagcagggcg agaggaacca ggagcagagg agcaggttca actgataagc ttgc	234
338 <210> SEQ ID NO: 7	
339 <211> LENGTH: 225	
340 <212> TYPE: DNA	
341 <213> ORGANISM: artificial sequence	
343 <220> FEATURE:	
344 <223> OTHER INFORMATION: Sequence for an analog bovine GHRH sequence.	
346 <400> SEQUENCE: 7	
347 gccatgggtgc tgtgggtgtt cttcctgggtg accctgaccc tgagcagcgg ctccccacggc	60

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349 tccctgccct cccagccctc gcgcatccct cgctacgccc acgccatctt caccaacagg 120  
 351 taccgcaagg tgctcggcca gctcagcgcc cgcaagctcc tgcaaggacat catgaaccgg 180  
 353 cagcagggcg agcgcaacca ggagcaggga gcctgataag cttgc 225  
 356 <210> SEQ ID NO: 8  
 357 <211> LENGTH: 225  
 358 <212> TYPE: DNA  
 359 <213> ORGANISM: artificial sequence  
 361 <220> FEATURE:  
 362 <223> OTHER INFORMATION: Sequence for an analog ovine GHRH sequence.  
 364 <400> SEQUENCE: 8  
 365 gccatgggtgc tgggggtgtt cttcctggtg accctgaccc tgagcagcgg aagccacggc 60  
 367 agcctgccccca gccagccctc gaggatccctt aggtacgccc acgccatctt caccaacagg 120  
 369 tacaggaaga tcctgggcca gctgagcgctt aggaagctcc tgcaaggacat catgaacagg 180  
 371 cagcagggcg agaggaacca ggagcagggc gcctgataag cttgc 225  
 374 <210> SEQ ID NO: 9  
 375 <211> LENGTH: 246  
 376 <212> TYPE: DNA  
 377 <213> ORGANISM: artificial sequence  
 379 <220> FEATURE:  
 380 <223> OTHER INFORMATION: Sequence for an analog chicken GHRH sequence.  
 382 <400> SEQUENCE: 9  
 383 gccatgggtgc tctgggtgct ctttgtgatc ctcatcctca ccagcggcag ccactgcagc 60  
 385 ctgcctccca gccctccctt caggatgcag aggcacgtgg acgccatctt caccaccaac 120  
 387 tacaggaagc tgctgagcca gctgtacgccc aggaaggtga tccaggacat catgaacaag 180  
 389 cagggcgaga ggatccagga gcagaggggcc aggctgagct gataagottg cgatgagttc 240  
 391 ttctaa 246  
 394 <210> SEQ ID NO: 10  
 395 <211> LENGTH: 190  
 396 <212> TYPE: DNA  
 397 <213> ORGANISM: artificial sequence  
 399 <220> FEATURE:  
 400 <223> OTHER INFORMATION: Nucleic acid sequence of human growth hormone poly A tail.  
 402 <400> SEQUENCE: 10  
 403 ggggtggcattt cctgtgaccc ctccccagtgc ccttcctgg cccttggaaat tgccactcca 60  
 405 gtgcacca gcttgcctt aataaaatata agttgcattca ttttgtctga cttaggtgtcc 120  
 407 ttctataata ttatgggggtg gaggggggtg gtatggagca aggggcaatg tggaaagaca 180  
 409 acctgttaggg 190  
 412 <210> SEQ ID NO: 11  
 413 <211> LENGTH: 55  
 414 <212> TYPE: DNA  
 415 <213> ORGANISM: artificial sequence  
 417 <220> FEATURE:  
 418 <223> OTHER INFORMATION: Nucleic acid sequence of human growth hormone 5' untranslated  
 419 region  
 421 <400> SEQUENCE: 11  
 422 caaggcccaa ctccccgaac cactcagggt cctgtggaca gctcacctag ctgcc 55  
 425 <210> SEQ ID NO: 12  
 426 <211> LENGTH: 782  
 427 <212> TYPE: DNA

**VERIFICATION SUMMARY**

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Input Set : E:\Revised Sequence Listing 11-21-06.ST25.txt  
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L:9 M:270 C: Current Application Number differs, Replaced Current Application No  
L:9 M:271 C: Current Filing Date differs, Replaced Current Filing Date